

## **NANO-SIZED POLYMER-METAL COMPOSITES**

### **ABSTRACT**

A polymer nanoparticle is provided. The nanoparticle includes an inner layer having alkenylbenzene monomer units. The nanoparticle further includes an outer layer having monomer units selected from conjugated dienes, alkylenes, alkenylbenzenes, and mixtures thereof. The nanoparticle has at least one functional group associated  
5 with the outer layer. The nanoparticle further has at least one metal complexed with said functional group. The nanoparticles can be used as a templates for preparation of nano-sized metal crystals and polymer-metal nanocomposite.

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